

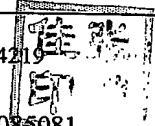
PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

| | | | |
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| Applicant's or agent's file reference 041241-P | | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/CN2004/000234 | International filing date (day/month/year) 22.Mar.2004 (22.03.2004) | Priority date (day/month/year) 20.Mar.2003 (20.03.2003) | |
| International Patent Classification (IPC) or national classification and IPC IPC(7):A61K31/122、A61K31/164、A61K9/127、A61K7/48、A61P17/02、A61P17/14、A61P17/16、A61P17/00 | | | |
| Applicant SHANGHAI JAHWA UNITED CO., LTD. et al | | | |
| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 3 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> | | | |

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| Date of submission of the demand 17.Jan.2005 (17.01.2005) | Date of completion of this report 25.Jan.2005 (25.01.2005) |
| Name and mailing address of the IPEA/ State Intellectual Property Office of P.R.CHINA 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing 100088, China Facsimile No. (86-10)62019451 | <p>Authorized officer</p> <div style="text-align: center;">  4219 </div> <p>Telephone No. (86-10): 62085081</p> |

Box No. I Basis of the report

- With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
 - international search (under Rules 12.3 and 23.1(b))
 - publication of the international application (under Rule 12.4)
 - international preliminary examination (under Rules 55.2 and/or 55.3)
- With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):
 - the international application as originally filed/furnished
 - the description:

| | | |
|---------|-------|-------------------------------------|
| pages | _____ | as originally filed/furnished |
| pages * | _____ | received by this Authority on _____ |
| pages * | _____ | received by this Authority on _____ |
 - the claims:

| | | |
|---------|-------|---|
| pages | _____ | as originally filed/furnished |
| pages * | _____ | as amended (together with any statement) under Article 19 |
| pages * | _____ | received by this Authority on _____ |
| pages * | _____ | received by this Authority on _____ |
 - the drawings:

| | | |
|---------|-------|-------------------------------------|
| pages | _____ | as originally filed/furnished |
| pages * | _____ | received by this Authority on _____ |
| pages * | _____ | received by this Authority on _____ |
 - a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.
- The amendments have resulted in the cancellation of:
 - the description, pages _____
 - the claims, Nos. _____
 - the drawings, sheets/figs _____
 - the sequence listing (*specify*): _____
 - any table(s) related to sequence listing (*specify*): _____
- This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - the description, pages _____
 - the claims, Nos. _____
 - the drawings, sheets/figs _____
 - the sequence listing (*specify*): _____
 - any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement:

| | | |
|-------------------------------|--------------|-----|
| Novelty (N) | Claims 1-9 | YES |
| | Claims _____ | NO |
| Inventive step (IS) | Claims 1-9 | YES |
| | Claims _____ | NO |
| Industrial applicability (IA) | Claims 1-9 | YES |
| | Claims _____ | NO |

2. Citations and explanations (Rule 70.7)

The present invention relates to a coenzyme Q10 and ceramide-containing proliposome, the preparation and the use thereof.

The following documents have been considered for the purpose of this written opinion:

Document 1: CN1294017A, (WANG Jiwen et al) 09.May.2001 (09.05.2001), abstract

Document 2: EP0069399A2, (EISAI CO., LTD.) 12.Jan. 1983 (12.01.1983), abstract

Document 3: JP57075916A, ((NICHIM)NIPPON CHEMIPHAR COMPANY) 12.May. 1982 (12.05.1982), abstract

Document 4: Mol Aspects Med. 1994, Vol 15, WEIS, M et al, "Bioavailability of four oral coenzyme Q10 formulations in healthy volunteers" page 273-280, MEDLINE abstract

Document 5: Biofactor. 1999, Vol 9, NIIBORI K et al, "Bioenergetic effect of liposomal coenzyme Q10 on myocardial ischemia reperfusion injury" page 307-313, MEDLINE abstract

(1) Novelty

D1 disclose a ceramide containing liposome, and D2-D5 disclose a coenzyme Q10-containing liposome. However, a ceramide and coenzyme Q10-containing liposome is not described in each of D1-D5, and the instruction that ceramide can improve the transdermal absorption of coenzyme Q10 is also not described in all the documents. Therefore, the subject-matter of claims 1-9 is considered to be novel over the documents cited in the search report (Art.33(2)PCT).

(2) Inventive step

The subject-matter of claims 1-9 is not considered to be obvious for a person skilled in the art according to the documents D1-D5. Therefore, the subject-matter of claims 1-9 is considered to involve an inventive step (Art.33(3)PCT).

(3) Industrial application

The subject-matter of claims 1-9 appears to be industrially applicable (Art.33(4)PCT).